

CLAIMS:

1. A method of operating a surveying rover, the method comprising the step of receiving GPS correction data from a digital wireless network.
- 5 2. The method of claim 1, wherein the receiving step comprises receiving GPS correction data from a circuit switched digital wireless network.
3. The method of claim 1, wherein the receiving step comprises receiving GPS correction data from a circuit switched digital wireless network using a  
10 Code Division Multiple Access transmission.
4. The method of claim 1, wherein the receiving step comprises receiving GPS correction data from a circuit switched digital wireless network using a Time Division Multiple Access transmission.  
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5. The method of claim 1, wherein the receiving step comprises receiving GPS correction data from a packet switched digital wireless network.
6. The method of claim 1, wherein the receiving step comprises  
20 receiving GPS correction data from a packet switched digital wireless network using a Code Division Multiple Access transmission.
7. The method of claim 6, wherein the Code Division Multiple Access transmission comprises a Code Division Multiple Access 1XRTT  
25 transmission.

8. The method of claim 1, wherein the receiving step comprises receiving GPS correction data from a Personal Communication Services digital wireless network.

5 9. The method of claim 1, wherein the receiving comprises receiving GPS correction data from a Global System for Mobil Communications digital wireless network.

10 10. The method of claim 1, wherein the receiving step comprises receiving GPS correction data from a digital wireless network using a Code Division Multiple Access transmission.

15 11. The method of claim 10, wherein the Code Division Multiple Access transmission comprises a Code Division Multiple Access 1XRTT transmission.

20 12. The method of claim 10, wherein the receiving step further comprises receiving GPS correction data formatted for an Internet Protocol transmission from the digital wireless network using the Code Division Multiple Access transmission.

25 13. The method of claim 1, wherein the receiving step comprises receiving the GPS data from a digital wireless network using a Time Division Multiple Access transmission.

14. The method of claim 1, wherein the receiving step comprises receiving GPS correction data formatted for an Internet Protocol transmission.

15. The method of claim 14, wherein the receiving step further comprises converting the GPS correction data formatted for an Internet Protocol transmission into GPS correction data formatted for a serial transmission.

5 16. A method of operating a surveying rover, the method comprising the step of receiving GPS correction data from a circuit switched wireless network.

10 17. The method of claim 16, wherein the receiving step comprises receiving GPS correction data from a circuit switched wireless network using a Code Division Multiple Access transmission.

15 18. The method of claim 16, wherein the receiving comprises receiving GPS correction data from a circuit switched wireless network using a Time Division Multiple Access transmission.

20 19. The method of claim 16, wherein the receiving step comprises receiving the GPS correction data from a circuit switched wireless network using a Frequency Division Multiple Access transmission.

20. The method of claim 16, wherein the receiving step comprises receiving the GPS correction data from a Global System for Mobil Communications circuit switched wireless network.

25 21. The method of claim 20, wherein the receiving step comprises receiving GPS correction data formatted for an Internet Protocol transmission from the Global System for Mobil Communications circuit switched wireless network.

22. The method of claim 16, wherein the receiving step comprises receiving the GPS correction data from an Advanced Mobile Phone Service circuit switched wireless network.

5                   23. The method of claim 16, wherein the receiving step comprises receiving GPS correction data formatted for an Internet Protocol transmission from a circuit switched wireless network.

10                   24. The method of claim 23, wherein the receiving step further comprises converting the GPS correction data formatted for an Internet Protocol transmission into GPS correction data formatted for a serial transmission.

                  25. A method of operating a surveying rover, the method comprising the steps of:  
15                   receiving GPS correction data formatted for an Internet Protocol transmission from a digital wireless network; and  
                  generating a serial output based on the GPS correction data.

20                   26. The method of claim 25, wherein the generating step comprises converting the GPS correction data formatted for an Internet Protocol transmission into GPS correction data formatted for a serial transmission.

                  27. The method of claim 25, further comprising the step of transmitting the serial output to a GPS receiver of a surveying rover.

28. The method of claim 25, wherein the receiving step comprises receiving GPS correction data formatted for an Internet Protocol transmission from a circuit switched digital wireless network.

5                   29. The method of claim 25, wherein the receiving step comprises receiving GPS correction data formatted for an Internet Protocol transmission from a circuit switched digital wireless network using a Code Division Multiple Access transmission.

10                   30. The method of claim 25, wherein the receiving step comprises receiving GPS correction data formatted for an Internet Protocol transmission from a circuit switched digital wireless network using a Time Division Multiple Access transmission.

15                   31. The method of claim 25, wherein the receiving step comprises receiving GPS correction data formatted for an Internet Protocol transmission from a packet switched digital wireless network.

20                   32. The method of claim 25, wherein the receiving step comprises receiving GPS correction data formatted for an Internet Protocol transmission from a packet switched digital wireless network using a Code Division Multiple Access transmission.

25                   33. The method of claim 32, wherein the Code Division Multiple Access transmission comprises a Cod Division Multiple Access 1XRTT transmission.

34. The method of claim 25, wherein the receiving step comprises receiving GPS correction data formatted for an Internet Protocol transmission from a Personal Communication Services digital wireless network.

5 35. The method of claim 25, wherein the receiving step comprises receiving GPS correction data formatted for an Internet Protocol transmission from a Globil System for Mobil Communications digital wireless network.

36. The method of claim 25, wherein the receiving step comprises  
10 receiving GPS correction data formatted for an Internet Protocol transmission from a digital wireless network using a Code Division Multiple Access transmission.

37. The method of claim 36, wherein the Code Division Multiple Access transmission comprises a Code Division Multiple Access 1XRTT  
15 transmission.

38. The method of claim 25, wherein the receiving step comprises receiving GPS correction data formatted for an Internet Protocol transmission from a digital wireless network using a Time Division Multiple Access transmission.  
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39. A communications assembly for a surveying rover, the communications assembly comprising:  
a computing device, and  
a wireless transceiver electrically coupled to the computing  
25 device, the wireless transceiver being configured to receive GPS correction data from a digital wireless network.

40. The communications assembly of claim 39, wherein the computing device comprises a Personal Digital Assistant.

41. The communications assembly of claim 39, wherein the  
5 wireless transceiver comprises a modem.

42. The communications assembly of claim 39, wherein the wireless transceiver comprises a modem configured to communicate with a digital wireless network.

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43. The communications assembly of claim 39, wherein the wireless transceiver comprises a wireless network card.

44. The communications assembly of claim 39, wherein the  
15 wireless transceiver comprises a cellular phone.

45. The communications assembly of claim 39, wherein the wireless transceiver comprises a Personal Communications Services phone.

20 46. The communications assembly of claim 39, wherein the wireless transceiver is configured to receive GPS correction data from a circuit switched digital wireless network.

25 47. The communications assembly of claim 39, wherein the wireless transceiver is configured to receive GPS correction data from a circuit switched digital wireless network using a Code Division Multiple Access transmission.

48. The communications assembly of claim 39, wherein the wireless transceiver is configured to receive GPS correction data from a circuit switched digital wireless network using a Time Division Multiple Access transmission.

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49. The communications assembly of claim 39, wherein the wireless transceiver is configured to receive GPS correction data from a packet switched digital wireless network.

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50. The communications assembly of claim 39, wherein the wireless transceiver is configured to receive GPS correction data from a packet switched digital wireless network using a Code Division Multiple Access transmission.

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51. The communications assembly of claim 50, wherein the Code Division Multiple Access transmission comprises a Code Division Multiple Access 1XRTT transmission.

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52. The communications assembly of claim 39, wherein the wireless transceiver is configured to receive GPS correction data from a Personal Communication Services digital wireless network.

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53. The communications assembly of claim 39, wherein the wireless transceiver is configured to receive GPS correction data from a Global System for Mobil Communications digital wireless network.



54. The communications assembly of claim 39, wherein the wireless transceiver is configured to receive GPS correction data from a digital wireless network using a Code Division Multiple Access transmission.

5 55. The communications assembly of claim 54, wherein the Code Division Multiple Access transmission comprises a Code Division Multiple Access 1XRTT transmission.

56. The communications assembly of claim 39, wherein the  
10 wireless transceiver is configured to receive the GPS data from a digital wireless network using a Time Division Multiple Access transmission.

57. The communications assembly of claim 39, wherein the wireless transceiver is configured to receive GPS correction data formatted for an  
15 Internet Protocol transmission from a digital wireless network.

58. The communications assembly of claim 39, wherein the computing device is configured to convert the GPS correction data formatted for an Internet Protocol transmission into GPS correction data formatted for a serial  
20 transmission.

59. A surveying rover, comprising:  
a GPS receiver configured to receive GPS data from a satellite,  
and  
25 a wireless transceiver configured to receive GPS correction data from a digital wireless network.

60. The surveying rover of claim 59, further comprising a controller, wherein both the GPS receiver and the wireless transceiver are configured to communicate with the controller.

5                   61. The surveying rover of claim 60, further comprising a Personal Digital Assistant electrically coupled to both the wireless transceiver and the controller.

62. The surveying rover of claim 61, wherein the wireless  
10 transceiver is configured to receive GPS correction data formatted for an Internet Protocol transmission.

63. The surveying rover of claim 62, wherein the Personal Digital Assistant is configured to convert the GPS correction data formatted for an Internet  
15 Protocol transmission to GPS correction data formatted for a serial transmission.

64. The surveying rover of claim 59, wherein the wireless transceiver is configured to receive GPS correction data from a circuit switched digital wireless network.  
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65. The surveying rover of claim 59, wherein the wireless transceiver is configured to receive GPS correction data from a circuit switched digital wireless network using a Code Division Multiple Access transmission.

25                   66. The surveying rover of claim 59, wherein the wireless transceiver is configured to receive GPS correction data from a circuit switched digital wireless network using a Time Division Multiple Access transmission.

67. The surveying rover of claim 59, wherein the wireless transceiver is configured to receive GPS correction data from a packet switched digital wireless network.

5           68. The surveying rover of claim 59, wherein the wireless transceiver is configured to receive GPS correction data from a packet switched digital wireless network using a Code Division Multiple Access transmission.

69. The method of claim 68, wherein the Code Division Multiple  
10 Access transmission comprises a Code Division Multiple Access 1XRTT transmission.

70. The surveying rover of claim 59, wherein the wireless transceiver is configured to receive GPS correction data from a Personal  
15 Communication Services digital wireless network.

71. The surveying rover of claim 59, wherein the wireless transceiver is configured to receive GPS correction data from a Global System for  
Mobil Communications digital wireless network.

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72. The surveying rover of claim 59, wherein the wireless transceiver is configured to receive GPS correction data from a digital wireless network using a Code Division Multiple Access transmission.

25           73. The surveying rover of claim 72, wherein the Code Division Multiple Access transmission comprises a Code Division Multiple Access 1XRTT transmission.

74. The surveying rover of claim 59, wherein the wireless transceiver is configured to receive the GPS data from a digital wireless network using a Time Division Multiple Access transmission.

5                   75. A method of determining a GPS coordinate of a location, the method comprising:

receiving GPS data with a base station;  
generating GPS correction data based on the GPS data;  
transmitting the GPS correction data across a network;  
10                   accessing the network through a digital wireless network;  
retrieving the GPS correction data from the digital wireless network;

and

calculating the GPS coordinate of the location based on the GPS correction data.

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76. The method of claim 75, wherein the generating step comprises calculating the difference between the GPS data and a known coordinate value of the location.

20                   77. The method of claim 75, wherein the generating step comprises generating GPS correction data formatted for an Internet Protocol transmission based on the GPS data.

78. The method of claim 77, wherein the transmitting step  
25                   comprises transmitting the GPS correction data formatted for an Internet Protocol transmission across a digital wireless network.

79. The method of claim 75, wherein the transmitting step comprises transmitting the GPS correction data across a publicly-accessible global network.

5                   80. The method of claim 75, wherein the transmitting step comprises periodically transmitting the GPS correction data across a network.

81. The method of claim 75, wherein the retrieving step comprises retrieving the GPS correction data from a circuit switched digital wireless network.

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82. The method of claim 75, wherein the retrieving step comprises retrieving GPS correction data from a circuit switched digital wireless network using a Code Division Multiple Access transmission.

15                   83. The method of claim 75, wherein the retrieving step comprises retrieving GPS correction data from a circuit switched digital wireless network using a Time Division Multiple Access transmission.

84. The method of claim 75, wherein the retrieving step comprises  
20 retrieving GPS correction data from a packet switched digital wireless network.

85. The method of claim 75, wherein the retrieving step comprises retrieving GPS correction data from a packet switched digital wireless network using a Code Division Multiple Access transmission.

86. The method of claim 85, wherein the Code Division Multiple Access transmission comprises a Code Division Multiple Access 1XRTT transmission.

5 87. The method of claim 75, wherein the retrieving step comprises retrieving GPS correction data from a Personal Communication Services digital wireless network.

88. The method of claim 75, wherein the retrieving step comprises  
10 retrieving GPS correction data from a Global System for Mobil Communications digital wireless network.

89. The method of claim 75, wherein the retrieving step comprises  
retrieving GPS correction data from a digital wireless network using a Code Division  
15 Multiple Access transmission.

90. The method of claim 89, wherein the Code Division Multiple Access transmission comprises a Code Division Multiple Access 1XRTT transmission.

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91. The method of claim 75, wherein the retrieving step comprises retrieving the GPS correction data from a digital wireless network using a Time Division Multiple Access transmission.

25 92. The method of claim 75, wherein the retrieving step comprises retrieving GPS correction data formatted for an Internet Protocol transmission.

93. The method of claim 92, wherein the retrieving step further comprises converting the GPS correction data formatted for an Internet Protocol transmission into GPS correction data formatted for a serial transmission.

5                   94. The method of claim 75, wherein the retrieving step further comprises serially transmitting the GPS correction data to a GPS receiver of a surveying rover.

95. The method of claim 75, wherein the calculating step comprises  
10 summing the GPS correction data with GPS data received by a surveying rover.

96. A communications assembly for a surveying rover, the communications assembly comprising:  
a wireless transceiver;  
15 a processor electrically coupled to the wireless transceiver; and  
a memory device electrically coupled to the processor, the memory device having stored therein a plurality of instructions, which when executed by the processor, causes the processor to:  
operate the wireless transceiver to receive GPS correction data  
20 formatted for an Internet Protocol transmission from a digital wireless network, and  
generate a serial output based on the GPS correction data.

97. The communications assembly of claim 96, wherein the plurality of instructions when executed by the processor further causes the processor  
25 to convert the GPS correction data formatted for an IP transmission to GPS correction data formatted for a serial transmission.

98. The communications assembly of claim 96, wherein the plurality of instructions when executed by the processor further causes the processor to transmit the serial output to a GPS receiver of the surveying rover.

5           99. The communications assembly of claim 96, wherein the plurality of instructions when executed by the processor further causes the processor to operate the wireless transceiver to receive GPS correction data formatted for an IP transmission from a circuit switched digital wireless network.

10           100. The communications assembly of claim 96, wherein the plurality of instructions when executed by the processor further causes the processor to operate the wireless transceiver to receive GPS correction data formatted for an Internet Protocol transmission from a circuit switched digital wireless network using a Code Division Multiple Access transmission.

15           101. The communications assembly of claim 96, wherein the plurality of instructions when executed by the processor further causes the processor to operate the wireless transceiver to receive GPS correction data formatted for an Internet Protocol transmission from a circuit switched digital wireless network using a  
20 Time Division Multiple Access transmission.

          102. The communications assembly of claim 96, wherein the plurality of instructions when executed by the processor further causes the processor to operate the wireless transceiver to receive GPS correction data formatted for an  
25 Internet Protocol transmission from a packet switched digital wireless network.



103. The communications assembly of claim 96, wherein the plurality of instructions when executed by the processor further causes the processor to operate the wireless transceiver to receive GPS correction data formatted for an Internet Protocol transmission from a packet switched digital wireless network using a  
5 Code Division Multiple Access transmission.

104. The communications assembly of claim 103, wherein the Code Division Multiple Access transmission comprises a Code Division Multiple Access  
1XRTT transmission.

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105. The communications assembly of claim 96, wherein the plurality of instructions when executed by the processor further causes the processor to operate the wireless transceiver to receive GPS correction data formatted for an Internet Protocol transmission from a Personal Communication Services digital  
15 wireless network.

106. The communications assembly of claim 96, wherein the plurality of instructions when executed by the processor further causes the processor to operate the wireless transceiver to receive GPS correction data formatted for an  
20 Internet Protocol transmission from a Globil System for Mobil Communications digital wireless network.

107. The communications assembly of claim 96, wherein the plurality of instructions when executed by the processor further causes the processor  
25 to operate the wireless transceiver to receive GPS correction data formatted for an Internet Protocol transmission from a digital wireless network using a Code Division Multiple Access transmission.

108. The communications assembly method of claim 107, wherein the Code Division Multiple Access transmission comprises a Code Division Multiple Access 1XRTT transmission.

5           109. The communications assembly of claim 96, wherein the plurality of instructions when executed by the processor further causes the processor to operate the wireless transceiver to receive GPS correction data formatted for an Internet Protocol transmission from a digital wireless network, using a Time Division Multiple Access transmission.

10           110. The communications assembly of claim 96, wherein the wireless transceiver comprises a modem.

15           111. The communications assembly of claim 96, wherein the wireless transceiver comprises a modem configured to communicate with a digital wireless network.

          112. The communications assembly of claim 96, wherein the wireless transceiver comprises a wireless network card.

20           113. The communications assembly of claim 96, wherein the wireless transceiver comprises a cellular phone.

          114. The communications assembly of claim 96, wherein the  
25 wireless transceiver comprises a Personal Communications Services phone.

115. An article comprising:  
a computer-readable signal-bearing medium having a plurality  
of instructions, which when executed by a processor, causes the processor to:  
operate a wireless transceiver to receive GPS correction data  
5 formatted for an IP transmission from a digital wireless network, and  
generate a serial output based on the GPS correction data.

116. The article of claim 115, wherein the medium is a recordable  
data storage medium.

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117. The article of claim 115, wherein the medium is selected from a  
group consisting of magnetic, optical, biological and atomic data storage media.

118. The article of claim 115, wherein the medium is a modulated  
15 carrier signal.

119. The article of claim 115, wherein the plurality of instructions  
when executed by the processor further causes the processor to operate the wireless  
transceiver to receive GPS correction data formatted for an IP transmission from a  
20 digital wireless network selected from a group consisting of a circuit switched digital  
wireless network, a packet switched digital wireless network, a digital wireless  
network using a Code Division Multiple Access transmission, a digital wireless  
network using a Time Division Multiple Access transmission, a Global System for  
Mobil Communications digital wireless network, and a Personal Communication  
25 Services digital wireless network.